

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF HAWAII

In the Matter of the Application of)

HAWAIIAN ELECTRIC COMPANY, INC. )

DOCKET NO. 2012-0129

For Approval of an Amended and )  
Restated Power Purchase Agreement )  
For Renewable Firm Energy and )  
Capacity. )

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DECISION AND ORDER NO. 30950

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PUBLIC UTILITIES  
COMMISSION

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DECISION AND ORDER

By this Decision and Order, the commission approves the requests set forth in the application filed by HAWAIIAN ELECTRIC COMPANY, INC. ("HECO") on May 25, 2012,<sup>1</sup> as later amended by HECO's filings on October 30, 2012 and November 15, 2012. Specifically, the commission: (1) approves the Amended and Restated Power Purchase Agreement For Renewable Firm Energy and Capacity ("PPA" or "Contract"), dated May 9, 2012, by and between HECO and the City and County of

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<sup>1</sup>See Application, Exhibits 1-6, Verification, and Certificate of Service, filed on May 25, 2012 ("Application"). HECO served copies of the Application on the DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, DIVISION OF CONSUMER ADVOCACY ("Consumer Advocate"), which is, ex officio, a party to this proceeding, pursuant to Hawaii Revised Statutes ("HRS") § 269-51 and Hawaii Administrative Rules ("HAR") § 6-61-62. "Parties" hereinafter refers to HECO and the Consumer Advocate; no other persons moved to intervene or participate in this proceeding.

Honolulu ("City")<sup>2</sup> regarding the H-Power municipal solid waste disposal facility ("Facility"), as amended by Amendment No. 1 to the Contract, effective November 14, 2012, and filed on November 15, 2012 ("Amendment No. 1"); (2) finds that the purchased power costs to be incurred by HECO pursuant to the PPA are just and reasonable; (3) finds that the purchased power arrangements under the PPA, pursuant to which HECO will purchase energy and firm capacity from the City, are prudent and in the public interest; and (4) authorizes HECO to include the power purchase costs (and related revenue taxes) in HECO's Energy Cost Adjustment Clause ("ECAC") and Purchased Power Adjustment Clause ("PPAC"), as appropriate, to the extent that such costs are not included in HECO's base rates.

In addition, the commission grants the extension requests filed by the Consumer Advocate and HECO on October 12, 2012 and October 23, 2012, respectively.

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<sup>2</sup>HECO and the City are jointly referred to herein as the "Contracting Parties."

I.

Relevant Procedural Background

On May 25, 2012, HECO filed the Application, requesting:

1. Approval of the PPA, which HECO attached as Exhibit 1 to the Application;

2. A finding from the commission that the purchased power costs to be incurred by HECO pursuant to the PPA are just and reasonable;

3. A finding from the commission that the purchased power arrangements under the PPA, pursuant to which HECO will purchase energy and firm capacity from the City, are prudent and in the public interest;

4. Authorization for HECO to include the power purchase costs (and related revenue taxes) incurred by HECO pursuant to the PPA, including capacity and energy charges, in HECO's revenue requirements for ratemaking purposes and for purposes of determining the reasonableness of HECO's rates during the term of the PPA;<sup>3</sup>

5. Authorization for HECO to include the power purchase costs (and related revenue taxes) in HECO's ECAC and

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<sup>3</sup>This paragraph in the Application was later withdrawn by HECO in its Reply Statement of Position ("SOP"), filed on October 30, 2012 ("HECO's Reply SOP").

PPAC, as appropriate, to the extent that such costs are not included in base rates; and

6. Such other relief as may be just and reasonable under the circumstances.<sup>4</sup>

On June 14, 2012, the Consumer Advocate filed its Preliminary Statement of Position, stating its intent to participate in the docket and issue information requests ("IRs") on certain questions and concerns the Consumer Advocate had regarding the reasonableness of the requested relief.

On June 18, 2012, the commission issued Protective Order No. 30448, which approved the Parties' Stipulation for Protective Order, filed on May 29, 2012.

By Order No. 30473, issued on June 27, 2012, the commission instructed the Parties to submit a Proposed Stipulated Procedural Order.

On July 13, 2012, the Parties filed a Stipulated Procedural Schedule, which the commission approved by Order No. 30553, filed on August 3, 2012.

On July 17, 2012, the Consumer Advocate submitted IRs to HECO, to which HECO responded on July 30, 2012.

On August 9, 2012, the Consumer Advocate filed a letter requesting an extension to file its SOP until September 20, 2012, with a corresponding extension for HECO to

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<sup>4</sup>See Application at 1-2.

file its Reply SOP, if necessary, until September 26, 2012. The Consumer Advocate represented that an extension was necessary due to work that was required in other docketed matters and that HECO did not object to the extension request.

By letter filed on August 22, 2012, the Consumer Advocate supplemented its August 9, 2012 letter, explaining that additional time was needed to "address questions concerning information that was offered by the Company to the Consumer Advocate's [IRs] in support of the reasonableness of the terms, conditions and price of the Amended and Restated Power Purchase Agreement."<sup>5</sup>

On September 11, 2012, HECO filed revised responses to the Consumer Advocate's IRs and a revision to Exhibit 3 to the Application. HECO noted that the revisions were necessary "due to an inadvertent error that was discovered in the 2013 to 2015 avoided cost calculations."<sup>6</sup>

On September 13, 2012, the commission issued Order No. 30633 *Granting Consumer Advocate's Extension Request, Filed on August 9, 2012, as Supplemented on August 22, 2012.*

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<sup>5</sup>Letter filed on August 22, 2012, from the Consumer Advocate to the commission, at 1.

<sup>6</sup>Letter filed on September 11, 2012, from HECO to the commission, at 1.

On September 14, 2012, the Consumer Advocate submitted a second set of IRs to HECO.

By letter filed on September 17, 2012, the Consumer Advocate requested a second extension to file its SOP until October 12, 2012, with a corresponding extension for HECO to file its Reply SOP, if necessary, until October 18, 2012. The Consumer Advocate represented that: (1) additional time was needed for HECO to respond to the Consumer Advocate's second set of IRs, and for the Consumer Advocate to review the responses before filing its SOP; (2) HECO did not object to the extension request; and (3) the extension request was based on the understanding that, rather than filing responses to the IRs by September 17, 2012, as originally planned, HECO would file responses to the IRs no later than September 28, 2012.<sup>7</sup>

On September 28, 2012, the Commission issued Order No. 30660 *Granting Consumer Advocate's Extension Request, Filed on September 17, 2012.*

On September 28, 2012, HECO also responded to the Consumer Advocate's second set of IRs.

By letter filed on October 12, 2012, the Consumer Advocate requested an extension to file its SOP until October 17, 2012, with a corresponding extension for HECO to

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<sup>7</sup>See Letter filed on September 17, 2012, from the Consumer Advocate to the commission, at 1-2.

file its Reply SOP, if necessary, until October 23, 2012. The Consumer Advocate represented, inter alia, that an extension was needed to allow the Parties to complete discussions to address remaining questions.<sup>8</sup>

On October 17, 2012, the Consumer Advocate filed its SOP ("Consumer Advocate's SOP"), stating that it did not object to the requested relief in the Application, subject to one condition pertaining to Section 25.12(A)(5) of the PPA, discussed further below.

By letter filed on October 23, 2012, HECO requested an extension of time, from October 23, 2012 to October 30, 2012, to file a Reply SOP. HECO represented, inter alia, that an extension was needed because HECO was still in the process of evaluating the Consumer Advocate's proposed modifications to Section 25.12(A)(5) of the PPA, "whether an amendment to the PPA is necessary or warranted, and the process to secure such an amendment, if any, with the City."<sup>9</sup>

On October 30, 2012, HECO filed its Reply SOP, stating that the Contracting Parties were in the process of discussing and executing an amendment to the PPA to address the Consumer Advocate's concerns in its SOP.

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<sup>8</sup>See Letter filed on October 12, 2012, from the Consumer Advocate to the commission, at 1.

<sup>9</sup>Letter filed on October 23, 2012, from HECO to the commission, at 1.



On November 15, 2012, HECO filed Amendment No. 1 to the PPA that removed Section 25.12(A)(5) from the PPA.

## II.

### Application

#### A.

#### Original PPA and Facility

The PPA amends and restates a Purchase Power Contract Between Hawaiian Electric Company, Inc. and the City and County of Honolulu, dated March 10, 1986, as amended by: (1) Amendment No. 1 to Power Purchase Contract Between Hawaiian Electric Company, Inc. and The City and County of Honolulu, Dated March 10, 1986, dated March 7, 1990; (2) Firm Capacity Amendment to Purchase Power Contract Dated March 10, 1986, dated April 8, 1991; and (3) Amendment No. 2 to Purchase Power Contract Between Hawaiian Electric Co., Inc. and City and County of Honolulu, Dated March 10, 1986, dated April 28, 1992, effective April 8, 1991 (collectively, "Original PPA").<sup>10</sup>

Under the Original PPA, the City, a county of the State of Hawaii ("State"), owns, operates, and maintains a 46 megawatt ("MW") Honolulu Program of Waste Energy Recovery

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<sup>10</sup>The Original PPA was approved by the commission in Decision and Order No. 8698, filed on March 31, 1986, in Docket No. 5514 and Decision and Order No. 11700, filed on June 30, 1992, in Docket No. 6983.

("H-Power") waste to energy facility located in West Oahu ("Original Facility"). The Original Facility processes municipal solid waste into refuse derived fuel, which is burned in two boilers, with the resulting steam flowing through a turbine generator.<sup>11</sup>

B.

Description of the Expansion Facility

The City has expanded its Original Facility by adding an additional 27 MW of firm electricity generation capacity through the construction of a third boiler unit/combustion train, associated air pollution control equipment, turbine generator, cooling equipment, electrical interconnection equipment and ancillary equipment and structures ("Expansion Facility"). The PPA amends and restates the Original PPA, to incorporate certain modifications to the Original PPA relative to the Expansion Facility, and to extend the term of the Original PPA to enable HECO to acquire the additional capacity and energy associated with the Expansion Facility (for a total of 73 MW) over a longer term.<sup>12</sup>

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<sup>11</sup>See Application at 11.

<sup>12</sup>The Facility is exempted from the competitive bidding process set forth in the Framework for Competitive Bidding, adopted by the commission in Decision and Order No. 23121, filed

The Expansion Facility will be located immediately adjacent to the Original Facility on an approximately 24.635-acre parcel of real property located at Honouliuli, Ewa, Oahu. This site is currently wholly owned by the City, and is zoned I-2 for intensive industrial activities. The 73 MW Facility will be operated in parallel with HECO's system by a third-party operator, and electric energy will be provided on a firm capacity basis.

The municipal solid waste fuel source utilized by the H-Power Facility is considered a "renewable energy" resource under Hawaii's Renewable Portfolio Standards ("RPS") Law.<sup>13</sup> According to HECO,

[t]he City represents that the Facility will be a renewable firm capacity facility that is classified as an eligible resource under the State's RPS Law. Accordingly, based on the City's representation, energy delivered by the City to Hawaiian Electric from the Facility throughout the term of the PPA will meet the definition of "renewable electrical energy" or "renewable energy" as defined under HRS § 269-91.<sup>14</sup>

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on December 8, 2006, in Docket No. 03-0372. See Decision and Order, filed on December 15, 2009, in Docket No. 2009-0291.

<sup>13</sup>See HRS § 269-91. Pursuant to HRS § 269-92, Hawaii's electric utilities are required to use the following percentages of renewable electrical energy relative to their net electricity sales: (1) 10% by 2010; (2) 15% by 2015; (3) 25% by 2020; and (4) 40% by 2030.

<sup>14</sup>Application at 12-13 (citation omitted).

C.

Energy Pricing Negotiations and Evaluation

HECO states that it advised the City of the commission's determination that in circumstances where competitive bidding is not employed, the utility must provide evidence in any application for approval of any PPA that the price paid "is fair and in the best interest of the ratepayer."<sup>15</sup> HECO elaborates on the how the PPA pricing was negotiated and evaluated:

The City's representatives were forthcoming with the Project's actual cost information by providing the Company with access to the City's E-Builder document management system. Based upon this access, the Company was able to understand the City's costs for the project. The Company was then able to propose allocations of various cost categories based upon a characterization of the costs as solely attributable to the processing of waste, solely attributable to the generation of power, and costs which could be allocated between both functions. The Company organized and participated in a series of meetings between representatives of the parties to arrive at a price that could be the foundation of a PPA that the parties could jointly present to the Commission. In late August 2011, the City and Company were able to reach agreement in principle on a mutually acceptable cost of

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<sup>15</sup>Id. at 13 (citing Decision and Order, filed on August 8, 2008, in Docket No. 2008-0091, at 8-9).

generation based price which was then allocated between the Energy Charge and Capacity Charge as described more fully below and in Exhibit 3.<sup>16</sup>

The price for each megawatt-hour ("MWh") of energy delivered by the City and purchased by HECO is described in Article 5 of the PPA, and is computed by the following formula:

For energy delivered by the City in calendar year 2012:

For On-Peak Periods<sup>17</sup> in every day, seven days per week:

For the first 28.23 gigawatt-hours ("GWh") delivered in each month, the price shall be 15.70 cents per kilowatt-hour ("kWh").

For all energy delivered in excess of 28.23 GWh in each month, the price shall be 10.00 cents per kWh.

For Off-Peak Periods in every day, seven days per week:

For the first 7.62 GWh delivered in each month, the price shall be 15.25 cents per kWh.

For all energy delivered in excess of 7.62 GWh in each month, the price shall be 6.00 cents per kWh.

For energy delivered by the City in calendar years after 2012, the prices given for 2012 shall be escalated at a rate determined by the Gross Domestic Product Implicit Price

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<sup>16</sup>Id. at 13.

<sup>17</sup>On-Peak Period is defined as the period of each day from 7:00 a.m. to 8:59 p.m., and Off-Peak Period is defined as the period of each day from 9:00 p.m. to 6:59 a.m.

Deflator ("GDPIPD") index as published by the U.S. Department of Energy, Energy Information Administration in its Annual Energy Outlook.

Fixed capacity payments to the City are based on a fixed rate of \$0.0522 per kWh for each kWh of available energy. This value shall be in effect throughout the term of the PPA and is not subject to escalation. The capacity charge paid by HECO during any contract year shall not exceed \$17,685,360.<sup>18</sup>

According to HECO, its key considerations in the pricing negotiations with the City included, but were not limited to:

(1) Hawaiian Electric's desire for additional renewable energy resources; (2) the objective of delinking the energy pricing from fossil fuel prices; (3) the pricing of the proposal compared to Hawaiian Electric's long-run avoided costs, (4) the cost-based estimates of the proposed project, and (5) impacts or modifications to existing power purchase agreements.<sup>19</sup>

HECO conducted an evaluation of the pricing in the PPA and concluded that it is reasonable considering the factors set forth in Exhibit 3 attached to the Application, and that:

(a) over the 20-year contract term, the net present value of payments to the City is beneficial overall to the Company's customers; (b) the PPA energy pricing is within the range of Hawaiian Electric's filed avoided energy costs over the past year and is lower than Hawaiian Electric's

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<sup>18</sup>See Application, Exhibit 3, at 2-3; see also PPA, Article 5.

<sup>19</sup>Application at 14-15.

current avoided energy costs; (c) the pricing structure meets the requirement of Hawaii Revised Statutes Section 269-27.2(e) in that there is no linkage between the energy price and Hawaiian Electric's cost of fossil fuels; (d) the fixed price structure is simple and will contribute to stabilizing Hawaiian Electric's overall energy prices, and (e) the project will provide more renewable energy to the system.<sup>20</sup>

D.

#### Interconnection

An Interconnection Requirements Study ("IRS") was performed at the City's expense under an IRS Letter Agreement dated June 4, 2010. The IRS determined that:

- 1) No adverse impact on steady state performance of the system was found due to the Expansion Facility, including line overload or bus voltage issues, under normal conditions, single or double line contingency conditions, or under combination of crossing point outages and single line contingency conditions, per the Hawaiian Electric transmission planning criteria.
- 2) No transient stability problems due to line faults or unit trips were found with the proposed installation, per the Hawaiian Electric transmission planning criteria.
- 3) The dynamic response and tuning of the Expansion Facility controls is central to the assumptions and modeling used in the study. The actual dynamic response of the Expansion Facility should be confirmed during commissioning and

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<sup>20</sup>Id. at 15.

testing and the PSS/E transient stability model and parameters reflecting the as-built conditions of the unit should be provided by the City to Hawaiian Electric.

- 4) A final review by Hawaiian Electric engineers of the equipment installed to control the operation and protect the Expansion Facility will be needed upon installation and prior to the start of commercial operation. The required documentation will include drawings with the proposed protection settings and initial tuning parameters for unit controls.
- 5) The City will be required to coordinate its under and over frequency protection settings with Hawaiian Electric's underfrequency load shedding scheme and existing Hawaiian Electric generation under and over frequency trip settings.
- 6) The City will be required to provide under-voltage and over-voltage ride through capability, consistent with standard industry practices for conventional steam turbine generators. The voltage trip settings should be set to trip the unit only as needed to protect the unit, and as needed to clear near-in faults. The transient stability simulations revealed no abnormal voltage ride-through conditions that would require non-standard voltage based trip settings.
- 7) The City must deliver power to the Hawaiian Electric system at a power factor within the capability of the generators of the Original Facility and the Expansion Facility, in order to maintain the Hawaiian Electric scheduled power factor at the Point of Interconnection. The Expansion Facility must be capable of adjusting



its reactive power output to maintain the scheduled power factor as specified by Hawaiian Electric dispatch, to match current operating practices at Hawaiian Electric. The power factor range is from 1.0 unity to 0.85 lagging. Hawaiian Electric dispatch will continue to provide one power factor setpoint, applicable to the plant as a whole when both the Original Facility and the Expansion Facility are online. However, the Facility should be designed to operate in either power factor or voltage regulation control modes. The Facility should also have the capability of accepting controls to adjust the mode. The Facility will send the status of the mode to the Hawaiian Electric system operator.<sup>21</sup>

The point of interconnection will be at the 138 kilovolt ("kV") voltage level of HECO's system. The City will furnish, install, operate, and maintain the Facility, including the installation of 138 kV primary and backup relay equipment. Monitoring equipment and control and protective devices approved by HECO as suitable for parallel operation of the Facility with HECO's system shall also be the responsibility of the City.

HECO will construct, own, operate and maintain all interconnection facilities required to interconnect HECO's system with the Facility at 138 kV, up to the point of interconnection. At HECO's AES Substation, HECO will furnish,

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<sup>21</sup>Id. at 16-17.

install, operate, and maintain primary and backup 138 kV relay equipment as well as HECO-owned interconnection facilities.

HECO states in the Application that the estimated cost of interconnecting the Facility with HECO's system "currently totals \$656,000 exclusive of general excise tax"<sup>22</sup> and that this cost was paid by the City to HECO on May 10, 2012. Pursuant to the PPA, upon a final accounting of the total interconnection costs, if the total actual interconnection cost is less than the payment received by the City noted above, HECO shall repay the difference to the City within thirty days of the final accounting.<sup>23</sup>

E.

Key PPA Terms and Conditions

HECO maintains that the specific terms and conditions of the PPA were negotiated by HECO and the City<sup>24</sup> at arms-length,

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<sup>22</sup>Id. at 18.

<sup>23</sup>See id. at 19.

<sup>24</sup>The PPA reflects the fact that certain provisions that may be more common to a power purchase agreement with a private developer are not applicable in the same way to the City, a governmental entity. See PPA, Section 25.26(K). Thus, the Contracting Parties agreed that certain enumerated provisions in the PPA do not apply to the City, unless the City disposes of its right, title, or interest in the Facility, or assigns the PPA, to a non-governmental entity.

over a period of approximately one year. In addition, HECO asserts:

The PPA contains indemnification, insurance and other provisions, including, among other things, provisions pertaining to the Term, the City's delivery of firm energy and capacity from the Facility, and the City's compliance with laws, which will serve to protect Hawaiian Electric and its customers from certain risks associated with interconnecting the expanded Facility. Moreover, the terms and conditions of the PPA will not affect Hawaiian Electric's ability to provide electric service to its customers and is not discriminatory to other small power producers. Hawaiian Electric contends that, for these reasons, the purchased power arrangements (i.e., terms and conditions) under the PPA, pursuant to which Hawaiian Electric purchases energy from the City, are prudent and in the public interest.<sup>25</sup>

Some of the key terms and conditions of the PPA are summarized below.

1.

Term

Pursuant to Section 2.2(A) of the PPA, the term of the PPA commences upon the date of execution and remains in effect for an initial term of twenty years following the commercial operation date. At the end of the initial term, HECO shall have the first opportunity to negotiate with the City to purchase either: (1) the electric capacity and energy generated by the

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<sup>25</sup>Id. at 19.

Facility for periods beyond the term, or (2) the Facility itself.<sup>26</sup> If the initial term expires during active negotiations by the Contracting Parties for the purchase of either continued generation or the Facility, then the initial term shall be automatically extended on a month-to-month basis for as long as the negotiations continue in good faith. This extended term shall terminate sixty days after either Contracting Party notifies the other in writing that negotiations have terminated.

2.

Energy Pricing

As discussed above in Section II.C, pricing for the PPA is based on capacity and energy payments. The energy charges are tiered for on-peak and off-peak production and are annually escalated according to the GDPIPD. Capacity charges are fixed for the term of the Contract and are not escalated.

3.

Dispatch of Facility

The PPA is for renewable firm energy and capacity. Pursuant to the PPA, HECO has the right to dispatch capacity and real and reactive power delivered from the Facility to HECO's system and to start up and shut down the City's generating units

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<sup>26</sup>See PPA, Section 2.6(A).

at least once per day, as it deems appropriate in its reasonable discretion, subject only to and consistent with Good Engineering and Operating Practices, as defined in the PPA, and the operational provisions of the PPA.

Dispatch will be by the City's manual control under the direction of HECO's system operator.<sup>27</sup> If HECO determines and notifies the City that a condition exists that is likely to endanger the integrity of the system or is likely to have an adverse effect on the equipment of HECO's customers, the City shall immediately suspend or reduce electric energy deliveries as requested by HECO's system operator upon oral or written notice, as appropriate, to the extent required to eliminate the adverse impact. In addition, if HECO's system operator determines that a condition exists that is likely to endanger the safety of persons and/or property, HECO's system operator may remotely separate the Facility from the system by tripping the Facility's synchronizing breakers via HECO's Energy Management System without prior notice.

#### 4.

##### Compliance with Laws and Regulations

The City is responsible under the PPA for obtaining, at its expense, any and all necessary permits, government

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<sup>27</sup>See Application at 21.

approvals and land rights for the construction and operation of the Facility. Within thirty days of the date of execution of the PPA, the City is required to submit to HECO, copies of documents or other evidence that the City has obtained all required permits and land rights to construct and operate the Facility. The City is also responsible for installing, operating and maintaining the Facility safely and in compliance with all applicable laws.<sup>28</sup>

### III.

#### Consumer Advocate's SOP

The Consumer Advocate's SOP first examined whether the purchased power costs to be incurred by HECO pursuant to the PPA are just and reasonable. On this issue, the Consumer Advocate acknowledged "the City's willingness and efforts" in providing cost data, which was summarized in Exhibit 3A of the Application, and appeared to serve as the benchmark for the pricing structure of the PPA.<sup>29</sup>

Although the Consumer Advocate had remaining concerns with certain costs in the City's cost data, the Consumer Advocate recognized that the agreed-upon purchase power costs

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<sup>28</sup>See id. at 22.

<sup>29</sup>See Consumer Advocate's SOP at 9.

for the PPA were not directly based on the City's cost data; rather, this data was used as a benchmark for the actual negotiated prices.<sup>30</sup> On balance, the Consumer Advocate concluded that the overall pricing structure appeared reasonable for the reasons summarized below:

- The proposed pricing structure compares relatively favorably to the benchmark rate of \$0.1972/kWh, which was developed from the City's cost of planning and constructing the Expansion Facility and operating and maintaining the entire H-Power Facility;
- The proposed pricing structure for the PPA is delinked from fossil fuel pricing consistent with HRS § 269-27.2(c);
- The proposed pricing structure results in payments that are less than HECO's projected avoided costs, which ultimately results in near term and projected savings to HECO's ratepayers;
- Based on the information provided, the difference in HECO's avoided cost and the proposed pricing structure results in an immediate and forecasted estimated savings to ratepayers, in which the

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<sup>30</sup>See id. at 11.

monthly projected savings, based on two different forecasted scenarios, to a typical residential customer are as follows:

Exhibit 3 Scenario #	Typical Residential Bill Impact, \$/Month (based on 600 kwh per month usage)				
	2013	2017	2022	2027	2032
1	(\$0.97)	(\$4.15)	(\$4.46)	(\$3.08)	(\$1.30)
2	(\$1.03)	(\$6.04)	(\$8.47)	(\$9.14)	(\$9.53)

- Based on the Consumer Advocate's calculations and discussions with HECO personnel, the levelized price of the PPA for the twenty-year term is approximately \$224/MWh, which is comparable to the levelized prices for other renewable energy projects:

\$218/MWh	Kalaeloa Solar 2
\$220/MWh	Interisland Wind (estimated)
\$225/MWh	IC Sunshine
\$229/MWh	Kahuku Wind
\$229/MWh	Kawailoa Step Down Pricing
\$236/MWh	FIT Tier 3 photovoltaic ("PV")
\$256/MWh	Honua <sup>31</sup>

The Consumer Advocate also considered whether the purchased power arrangements under the PPA are prudent and in the public interest. Based on its review, the Consumer Advocate did not object to the terms and conditions in the PPA (with one exception discussed later), noting the following:

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<sup>31</sup>See id. at 12-14.



[I]n general, the terms and conditions are similar to prior Commission approved purchase power agreements[.] Furthermore, based on the Consumer Advocate's assessment, it appears that the terms and conditions (e.g., indemnification, compliance with laws) will mitigate certain risks to HECO and its customers associated with interconnection of the H-Power Facility and allow HECO to maintain its ability to provide electric service to its customers. Lastly, the terms and conditions that may differ do not appear to be discriminatory to H-Power or other IPPs.<sup>32</sup>

The Consumer Advocate observed other benefits to the

PPA:

- Under various sales forecasts, the PPA is estimated to make the following contributions to the RPS:  
(1) 1.0%-1.3% in 2015; (2) 0.9%-1.4% in 2020; and  
(3) 0.8%-1.7% in 2030;
- The PPA will meet another governmental objective of serving the health and welfare of the community by reducing the volume of Oahu's municipal solid waste that otherwise would be disposed of in the City's municipal landfill at Waimanalo Gulch;
- Measures were taken to increase the ramp rate of the Expansion Facility (i.e., 0.1 MW per minute) to a ramp rate of 2MW per minute by adding two dump condensers that will help mitigate potential

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<sup>32</sup>Id. at 15-16.

curtailment of as-available generation by allowing the unit to be reduced to lower output levels more quickly during light loading periods;

- In addition to increasing the ramp rate, to mitigate curtailment issues with future wind farm projects, HECO states that the output of the H-Power Facility will be scheduled on a week-ahead basis based on the anticipated amounts of as-available generation that will be delivered considering forecasted energy production information from the wind farms; and
- H-Power represents a source of firm energy, including the possibility of providing firm energy especially during evening peak hours, unlike PV or wind.<sup>33</sup>

The Consumer Advocate, however, had one concern regarding Section 25.12(A)(5) of the PPA, which provides:

25.12 PUC Approval

(A) PUC Approval Order.

The Parties acknowledge and agree that this Agreement is subject to approval by the PUC and the Parties' respective obligations hereunder are conditioned upon receipt of such approval, except as specifically provided otherwise herein. Upon execution of this Agreement, the Parties shall use good faith efforts to obtain, as soon as practicable, an order from the PUC ("PUC

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<sup>33</sup>See id. at 16-18.

Approval Order") that does not contain terms and conditions deemed to be unacceptable to Company, and is in a form deemed to be reasonable by Company, in its sole, but nonarbitrary, discretion, ordering that:

. . . . .

(5) Company may include the power purchase costs incurred by Company pursuant to this Agreement, including Capacity Charge and Energy Charge (fuel and variable O&M) in Company's revenue requirements for ratemaking purposes and for the purposes of determining the reasonableness of Company's rates during the Term of this Agreement.

The Consumer Advocate was concerned that HECO, through this provision, was requesting authority to include the power purchase costs associated with the PPA immediately in HECO's revenue requirements, as well as in HECO's next rate proceeding subsequent to commission approval of the PPA. According to the Consumer Advocate, such a request is "premature as the costs associated with the capacity and energy payments for the H-Power Facility will need to be reviewed in the context of the rate proceeding to assess the reasonable level of costs that should be included in the Company's revenue requirement."<sup>34</sup> The Consumer Advocate proposed revised language to Section 25.12(A)(5) to resolve its concern.<sup>35</sup>

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<sup>34</sup>Id. at 19-20.

<sup>35</sup>See id. at 20.

Lastly, noting that fuel and purchased power are the primary operating costs for electric utilities and that fuel costs have a significant impact on net operating income of an electric utility, the Consumer Advocate found it reasonable to include the power purchase costs associated with the PPA in HECO's ECAC and PPAC, as appropriate, to the extent such costs are not already included in HECO's base rates.

#### IV.

##### HECO's Reply SOP

On October 30, 2012, HECO filed its Reply SOP, in which it stated:

On April 23, 2012, Senate Bill No. 2752, Senate Draft 1 of the Twenty-Sixth Legislature of the State of Hawaii was signed into law ("Act 55") by the Governor. Act 55 took effect on July 1, 2012 and provides generally that all power purchase costs and other costs incurred by an electric utility arising out of power purchase agreements that have been approved by the Commission, shall be allowed to be recovered by the utility.

Accordingly, and given the statutory right of cost recovery provided through Act 55, the provision set forth in Section 25.12 (A)(5) of the PPA, and the corresponding requests for approval of this finding in the Company's Application, are no longer necessary. Therefore, and for purposes of addressing the Consumer Advocate's concern noted in the SOP, Hawaiian Electric and the City are in the process of discussing and executing an

Amendment No. 1 to the [PPA] which would delete Section 25.12 (A)(5) of the PPA. . . . Hawaiian Electric also respectfully withdraws from its Application paragraph 4 of the Company's requested approval order (referenced at pages 2 and 27 of the Application) which corresponds to Section 25.12 (A)(5) of the PPA.

The Consumer Advocate does not object to Hawaiian Electric's proposal above as it addresses the Consumer Advocate's concern raised in its SOP.<sup>36</sup>

V.

Amendment No. 1

On November 15, 2012, consistent with HECO's Reply SOP, HECO submitted an executed copy of Amendment No. 1 to the PPA, which deleted Section 25.12(A)(5) from the PPA.

VI.

Discussion

A.

PPA

As set forth by the Consumer Advocate, the issues to be addressed in this proceeding are:

1. Whether the proposed PPA should be approved.

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<sup>36</sup>HECO's Reply SOP at 2-3 (citation omitted).

- a. Whether the purchased power costs to be incurred by HECO pursuant to the proposed PPA are just and reasonable.
  - b. Whether the purchased power arrangements under the proposed PPA, pursuant to which HECO will purchase energy and Demonstrated Firm Capacity from the City, are prudent and in the public interest.
2. Whether authorizing HECO to include . . . the power purchase costs (and related revenue taxes) incurred by the Company pursuant to this PPA, including the Capacity Charge and Energy Charge in the Company's revenue requirements for ratemaking purposes and for the purposes of determining the reasonableness of the Company's rates during the term of the PPA should be approved.
  3. Whether [to approve] the inclusion of the power purchase costs (and related revenue taxes) in the Company's ECAC and PPAC, as appropriate, to the extent that such costs are just and reasonable.<sup>37</sup>

HECO seeks approval of the Application under HRS § 269-27.2(c), which provides:

The rate payable by the public utility to the producer for the nonfossil fuel generated electricity supplied to the public utility shall be as agreed between the public utility and the supplier and as approved by the public utilities commission; provided that in the event the public utility and the supplier fail to reach an

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<sup>37</sup>Consumer Advocate's SOP at 7-8.

agreement for a rate, the rate shall be as prescribed by the public utilities commission according to the powers and procedures provided in this chapter.

The commission's determination of the just and reasonable rate shall be accomplished by establishing a methodology that removes or significantly reduces any linkage between the price of fossil fuels and the rate for the nonfossil fuel generated electricity to potentially enable utility customers to share in the benefits of fuel cost savings resulting from the use of nonfossil fuel generated electricity. As the commission deems appropriate, the just and reasonable rate for nonfossil fuel generated electricity supplied to the public utility by the producer may include mechanisms for reasonable and appropriate incremental adjustments, such as adjustments linked to consumer price indices for inflation or other acceptable adjustment mechanisms.<sup>38</sup>

In addition, pursuant to HAR § 6-60-6(2), provided below, HECO seeks to include the purchased energy charges that are incurred by HECO under the PPA in HECO's ECAC:

No changes in fuel and purchased energy costs may be included in the fuel adjustment clause unless the contracts or prices for the purchase of such fuel or energy have been previously approved or filed with the commission.<sup>39</sup>

Thus, the commission must approve the PPA or the rates for purchase under the PPA, to allow HECO to include the costs of purchased energy under the PPA in its ECAC. The commission,

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<sup>38</sup>HRS § 269-27.2(c).

<sup>39</sup>HAR § 6-60-6(2).

upon review of the docket record, makes the following findings and conclusions:

1. The PPA contemplates retaining the Original 46 MW Facility and providing an additional 27 MW of firm renewable energy, while also facilitating solid waste disposal for the City. More specifically, as noted by the Consumer Advocate, the PPA serves the health and welfare of the community by reducing the volume of Oahu's municipal solid waste that otherwise would be disposed of in the City's municipal landfill at Waimanalo Gulch.

2. The Original Facility has been under contract since 1986 and has demonstrated that it is a reliable resource. The twenty-year term of the PPA is reasonable considering the demonstrated reliability of the Original Facility and reasonable pricing offered under the PPA, addressed more fully below.

3. The on-peak energy charges for calendar year 2012 are: (1) 15.70 cents per kWh for the first 28.23 GWh delivered in each month; and (2) 10.00 cents per kWh for all on-peak energy delivered in excess of 28.23 GWh in each month.

4. The off-peak energy charges for calendar year 2012 are: (1) 15.25 cents per kWh for the first 7.62 GWh delivered in each month; and (2) 6.00 cents per kWh for all off-peak energy delivered in excess of 7.62 GWh in each month.



5. The energy prices for 2012 shall be escalated each year by the GDPIPD.

6. Capacity payments are based on a fixed rate of \$0.0522 per kWh for each kWh of available energy; this charge is not subject to escalation and shall not exceed \$17,685,360 in any contract year.

7. The energy pricing summarized above contains a reasonable escalator that is not linked to the price of oil, consistent with HRS § 269-27.2, and the overall pricing under the contract serves as a hedge against volatile oil prices.

8. The firm capacity obligations in the PPA appear to be prudent and in the public interest.

9. Prices under the PPA compare favorably to prices under the Original PPA and HECO's avoided costs.

10. The PPA is expected to result in immediate and continued bill savings for HECO ratepayers.

11. The overall cost of delivered electricity under the PPA appears reasonable.

12. Given the reasonable electricity pricing under the PPA, it is reasonable to authorize recovery of the power purchase costs and related revenue taxes associated with the PPA through HECO's ECAC and PPAC, as appropriate, to the extent that such costs are not included in base rates.

13. The terms and conditions of the PPA, as a whole, appear reasonable and consistent with the State's overall energy policy of reducing the State's dependence on fossil fuel. Thus, the purchased power arrangements under the PPA appear prudent and in the public interest.

14. As noted by the Consumer Advocate, measures were taken with respect to scheduling the Facility's output and increasing the ramp rate of the Facility, which should help to mitigate potential curtailment of as-available generation.

15. The H-Power Facility, which is classified as an eligible resource under the State's RPS Law, will assist HECO in meeting its RPS requirements.

16. Amendment No. 1 to the PPA, which deletes Section 25.12(A)(5) of the PPA, appears reasonable, and is approved.

B.

Extension Requests

Based on good cause shown, the commission grants the Consumer Advocate's request for an extension of time, filed on October 12, 2012, for the filing of the Consumer Advocate's SOP and HECO's Reply SOP.<sup>40</sup> In addition, based on good cause shown,

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<sup>40</sup>The Consumer Advocate represented, inter alia, that an extension was needed to allow the Parties to complete

the commission grants HECO's request for an extension of time to file its Reply SOP, filed on October 23, 2012.<sup>41</sup>

VII.

Orders

THE COMMISSION ORDERS:

1. The Amended and Restated Power Purchase Agreement For Renewable Firm Energy and Capacity dated May 9, 2012, by and between HECO and the City, as amended by Amendment No. 1 to the Contract by and between HECO and the City, effective November 14, 2012, and filed on November 15, 2012, is approved.

2. The purchased power costs to be incurred by HECO pursuant to the PPA are just and reasonable.

3. The purchased power arrangements under the PPA, pursuant to which HECO will purchase energy and firm capacity from the City, are prudent and in the public interest.

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discussions to address remaining questions. See Letter filed on October 12, 2012, from the Consumer Advocate to the commission, at 1.

<sup>41</sup>HECO represented, inter alia, that an extension was needed because HECO was still in the process of evaluating the Consumer Advocate's proposed modifications to Section 25.12(A)(5) of the PPA, "whether an amendment to the PPA is necessary or warranted, and the process to secure such an amendment, if any, with the City." Letter filed on October 23, 2012, from HECO to the commission, at 1.

4. HECO is authorized to include the power purchase costs (and related revenue taxes) in HECO's ECAC and PPAC, as appropriate, to the extent that such costs are not included in HECO's base rates.

5. The Consumer Advocate's request for an extension of time, filed on October 12, 2012, is granted.

6. HECO's request for an extension of time, filed on October 23, 2012, is granted.

7. This docket is closed, unless otherwise ordered by the commission.

DONE at Honolulu, Hawaii JAN 17 2013.

PUBLIC UTILITIES COMMISSION  
OF THE STATE OF HAWAII

By *Hermina Morita*  
Hermina Morita, Chair

By *Michael E. Champley*  
Michael E. Champley, Commissioner

APPROVED AS TO FORM:

*Kaiulani Kidani Shinsato*  
Kaiulani Kidani Shinsato  
Commission Counsel

By *Lorraine H. Akiba*  
Lorraine H. Akiba, Commissioner

2012-0129.rs

CERTIFICATE OF SERVICE

The foregoing order was served on the date of filing by mail, postage prepaid, and properly addressed to the following parties:

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